

## 510(k) Summary

**Submitted By:** MeVis Medical Solutions AG  
Universitaetsallee 29  
28359 Bremen, Germany

**Establishment Name:** MeVis Medical Solutions AG

**Establishment Registration Number:** Applied for and awaiting assignment by FDA

**Contact Person:** Thomas E. Tynes  
President & CEO  
MeVis Medical Solutions, Inc.  
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USA  
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**Date Prepared:** 12/14/2011

**Trade Name:** Visia™ Neuro

**Common Name:** Medical Image Processing Software

**Classification Name:** Image Processing System

**Classification Regulation Number:** 892.2050

**Class:** II

**Panel:** Radiology

**Product Code:** LLZ

## Device Description

Visia™ Neuro is a medical image processing software application intended for the visualization of images from various sources such as Magnetic Resonance Imaging systems or from image archives. The system provides viewing, quantification, manipulation, communication, and printing of medical images.

Visia™ Neuro integrates within typical clinical workflow patterns through receiving and transferring medical images over a computer network. The software can be loaded on a standard off-the-shelf personal computer (PC) and can operate as a stand-alone workstation or in a distributed server-client configuration across a computer network.

The software provides functionality for processing and analyzing both anatomical and physiologic/functional imaging datasets. Specifically, the software includes user defined processing modules for image registration, blood oxygen level dependent (BOLD) functional magnetic resonance imaging (fMRI), diffusion imaging, fiber tracking, dynamic imaging, and vessel imaging. Processed images are stored as separate files from the original data such that the original data is preserved.

Images may be displayed based on physician preferences using configurable layouts, or hangings. Visia™ Neuro provides the clinician with a broad set of viewing and analysis tools in both 2D and 3D. The software includes tools to annotate, measure, and output selected image views or user defined reports.

## Intended Use

Visia™ Neuro is a medical image processing software application intended for the visualization of images from various sources such as Magnetic Resonance Imaging systems or from image archives. The system provides viewing, quantification, manipulation, communication, and printing of medical images. Visia™ Neuro provides both analysis and viewing capabilities for anatomical and physiologic/functional imaging datasets, including blood oxygen dependent (BOLD) fMRI, diffusion, fiber tracking, dynamic review, and vessel visualization. Data can be visualized in both 2D and 3D views.

### BOLD fMRI Review

The BOLD fMRI feature is useful in identifying small susceptibility changes arising from neuronal activity during performance of a specific task.

### Diffusion Review

The diffusion review feature is intended for visualization and analysis of the diffusion of water molecules through brain tissue.

### Fiber Tracking Review

The fiber tracking feature uses the directional portion of the diffusion vector to track and visualize white matter structures within the brain.

**Dynamic Review**

Dynamic review feature is intended for visualization and analysis of MRI dynamic studies, showing changes in contrast over time, where such techniques are useful or necessary.

**Vessel Visualization**

The vessel feature is used to identify and visualize the vascular structures of the brain.

**3D Visualization**

The 3D visualization feature allows image data to be reconstructed as 3D objects that are visualized and manipulated on a 2D screen.

**Predicate Device Information**

Product	Predicate Device Name	Predicate 510(k) Submission Reference
Visia™ Neuro	DC Neuro	K081262

**Safety and Effectiveness**

The Visia™ Neuro labeling contains instructions for use and necessary cautions, warnings and notes to provide for safe and effective use of the device. Risk Management is ensured via MeVis Medical Solution AG's Risk Management procedure, which is used to identify potential hazards. These potential hazards are controlled via software development and verification & validation testing.

**Nonclinical Testing and Performance Information**

The complete system configuration has been assessed and tested at the manufacturer's facility and has passed all in-house testing criteria. The Validation Test Plan was designed to evaluate all input functions, output functions, and actions performed by the software in each operational mode and followed the process documented in the Validation Test Plan.

Nonclinical testing results are provided in the 510(k). Validation testing indicated that as required by the risk analysis, designated individuals performed all verification and validation activities and that the results demonstrated that the predetermined acceptance criteria were met.

**Technological Characteristics**

Visia™ Neuro is a software device that does not contact the patient, nor does it control any life sustaining devices. Diagnosis is not performed by the software but by Radiologists, Clinicians and referring Physicians.

A physician, providing ample opportunity for competent human intervention interprets images and information being displayed and printed.

The new device and predicate devices are substantially equivalent in the areas of technical characteristics, general function, application, and intended use. The new device does not raise any new potential safety risks and is equivalent in performance to the existing legally marketed devices.

### **Conclusion**

The 510(k) Pre-Market Notification for Visia™ Neuro contains adequate information, data, and nonclinical test results to enable FDA – CDRH to determine substantial equivalence to the predicate device. MeVis Medical Solutions has determined that its device, Visia™ Neuro, is substantially equivalent to the identified predicate device listed above. A comparison with the legally marketed predicate device indicates that it is substantially equivalent to this device, and that it does not raise any new safety or efficacy concerns. Nonclinical tests demonstrate that the device is safe, effective, and is substantially equivalent to the predicate device.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room – WO66-G609  
Silver Spring, MD 20993-0002

MeVis Medical Solutions AG  
% Mr. Thomas E. Tynes  
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MeVis Medical Solutions, Inc.  
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FEB 16 2012

Re: K113701  
Trade/Device Name: Visia™ Neuro  
Regulation Number: 21 CFR 892.2050  
Regulation Name: Picture archiving and communications system  
Regulatory Class: II  
Product Code: LLZ  
Dated: December 14, 2011  
Received: December 16, 2011

Dear Mr. Tynes:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into class II (Special Controls), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

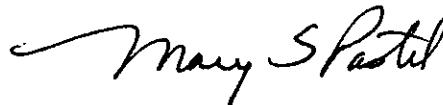
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); medical device reporting (reporting of

medical device-related adverse events) (21 CFR 803); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820). This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Parts 801 and 809), please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (301) 796-5450. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely Yours,

A handwritten signature in black ink, reading "Mary S. Pastel". The signature is fluid and cursive, with the first name "Mary" being more prominent than the last name "Pastel".

Mary S. Pastel, Sc.D.  
Director  
Division of Radiological Devices  
Office of In Vitro Diagnostic Device  
Evaluation and Safety  
Center for Devices and Radiological Health

Enclosure

## Indications for Use Statement

510(k) Number (if known): K113701

Device Name: Visia™ Neuro

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Prescription Use   X    
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

Mary S. Postel  
Division Sign-Off  
Office of In Vitro Diagnostic Device  
Evaluation and Safety

510(k) K113701